## **Listing of Claims:**

- 1. (Currently Amended) A method in a terminal device, comprising:
- a) establishing a first wireless low-power communication terminals <u>link</u> with another device;
- b) establishing a second-significantly faster <u>higher data rate</u> wireless communication link with the another device; and
- c) controlling communication of the second Dear Tommy,
  wherein the first <u>low-power</u> wireless communication link frees the second <u>higher data</u>
  rate wireless communication link from link control overhead.
- 2. (Currently Amended) The method of claim 1 wherein the second <u>higher data</u>

  <u>rate</u> wireless communication link is established based on information communicated via the first wireless <u>low-power</u> communication link.
  - 3. (Currently Amended) A method, comprising:
- a) attaching to a mobile device a <u>removable</u> memory <u>stick-module</u> including integrated memories and an ultra-wideband (UWB) transceiver;
- b) establishing a wireless low power communication eonnection <u>link using</u>

  <u>link manager protocol data</u> for exchanging UWB parameters between the mobile device and a base device having base integrated memories and a base UWB transceiver;—and
- c) initiating an ultra wideband transmission between the mobile device and the base device based on the exchanged UWB parameters: ; and

- d) wherein no link manager protocol data is transmitted in the ultra wideband transmission and there is no change in the direction of the a data transfer flow of a receiver side eliminating sending acknowledgements to a transmitter side.
  - (Currently Amended) The method of claim 3, further comprising: 4.
- transmitting data from the base device to the removable memory stick de) module via the ultra wideband transmission link for storage in the integrated memories of the removable memory stick module;
- forwarding the transmitted data from the removable memory stick-module ef) to the mobile device memories through a connector and a bus interface; and
  - processing the transmitted data in the mobile device. g)
  - (Currently Amended) The method of claim 4 further comprising; 5.
- requesting an acknowledgement from the mobile device via the low power **d-h**) communication connection before each sequential ultra wideband transmission.
  - (Currently Amended) The method of claim 5 further comprising: 6.
- eiperforming pulse repetition rate and PN code modulation of a UWB transceiver to transmit data.
  - (Currently Amended) The method of claim 6 further comprising: 7.
    - fj) storing transmitted data in the integrated memory of the receiving device.
  - 8. (Currently Amended) The method of claim 7 further comprising:
- performing precalculated heavy error coding of the transmitted data prior g-k) to transmitting said data.
  - 9. (Currently Amended) The method of claim 8 further comprising:
    - performing simple error checking of received transmitted data. h-I)

## 10. (Currently Amended) A method, comprising:

- a) attaching to a mobile device a <u>removable</u> memory <u>stick module</u> including an integrated memory and ultra wideband (UWB) transmitter and receiver which captures UWB transmitted data up to 1Gbit/second;
- b) establishing a base device including an integrated memory and a base UWB transmitter and receiver;
- c) initiating a low power communication connection between the mobile device and the base device;
- d) exchanging UWB parameters between the devices via the low power communication connection;
- e) activating the mobile device UWB transmitter for transmitting data as modulated pulse trains to the base device receiver;
- f) demodulating the mobile device UWB transmitter pulse trains in the base device UWB receiver;
- g) transmitting from the base device UWB transmitter to the mobile device UWB receiver, modulated pulse trains of the base device UWB transmitter interleaved between the modulated pulse trains of the mobile device UWB transmitter; and
- h) demodulating the modulated pulse trains of the base device UWB transmitter in the mobile device UWB receiver.
- 11. (Original) The method of claim 10 wherein the low power communication connection is a Bluetooth connection.

- 12. (Original) The method of claim 11 wherein the integrated memories comprise
- a high-speed memory with direct memory access.
- 13. (Currently Amended) The method of claim 12 wherein the base device is another mobile device attached with a <u>removable</u> memory <u>stick-module</u>.
  - 14. (Currently Amended Apparatus comprising:
- a) means for establishing a first low-power radio link between first and second terminals;
- b) means for establishing a second significantly faster radio link between the terminals for data throughput; and
- radio link via the first low-power radio link wherein the first low-power radio link frees the second <u>higher data rate</u> radio link from link control overhead.
- 15. (Original) The apparatus of claim 14 wherein the second higher data rate radio link serves as a direct data channel for actual data payload.
- 16. (Currently Amended) The apparatus of claim 14 wherein there is no change in the direction of the flow of to a receiver side eliminating sending acknowledgements to a transmitter side.
- 17. (Previously Presented) The apparatus of claim 16 wherein the direct data channel eliminates time-consuming adjustments due to transceiver/receiver switching where possible loss of data occurs.
  - 18. (Currently Amended) The apparatus of claim 14 further comprising:

- d) means including a high capacity memory and a <u>an ultra wide band</u> (UWB) transceiver attached to a terminal for capture of data at high speed and transfer to a utilization device at lower speeds.
  - 19. (Previously Presented) Apparatus, comprising:
    - a) a first control circuitry;
    - b) a first memory;
- c) low power communications means for communicating over a wireless low power communication link;
- d) data bus circuitry interconnecting the <u>a</u> first processor, <u>the</u> first memory and <u>the</u> low power communication <u>means-link</u>; and
- e) a detachable memory unit connectable to the data bus circuitry through a connector interface, comprising:
  - i) a second control circuitry;
- ii) a an ultra wide band (UWB) receiver for receiving data over a

  UWB communication link
  - iii) a second memory for temporarily storing the received data, and
- iv) <u>a</u> circuit means connecting the <u>a</u> second processor, the UWB receiver and the second memory together and to the data bus circuitry through the connector interface,

wherein the wireless low power communication link controls the UWB communication link to keep data receiving rate of the UWB communication link optimized by freeing and frees the UWB communication link from link control overhead.

20. (Currently Amended) The apparatus of claim 19 further comprising:

- vf) a UWB transmitter connected to the circuit means for transferring data
  - 21. Currently Amended) The apparatus of claim 19 further comprising:
    - vg) display means connected to the first control circuitry.
- 22. (Currently Amended) The apparatus of claim 19 wherein the low power communication means is taken from the group consisting of Bluetooth, IrDa, HIPERLAN, WLAN, ZigBee, IEEE 802.11x, and IEEE 802.15-and equivalent low power communication means implementing compatible protocols with the group.
  - 23-27. (Canceled)

over the UWB communication link.

- 28. Currently Amended) Apparatus, comprising:
  - a processor;
- a first wireless transceiver module coupled with the processor for establishing a first low-power radio link with another device; and
- a second wireless transceiver module coupled with the processor for establishing a second significantly faster higher data rate radio link with the another device;

wherein the processor is configured to control the operation of the first and second wireless transceiver modules so that the first radio link controls the second <a href="https://piper.com/higher data">higher data</a> rate radio link by freeing the second <a href="https://higher.com/higher data">higher data</a> rate radio link from link control overhead.

29. (Currently Amended) The apparatus of claim 29, wherein the processor is further configured to control the operation of the first and second wireless transceiver modules so that the second <a href="https://doi.org/10.1001/journal.com/higher data rate">higher data rate</a> wireless communication link is established based on information communicated via the first wireless communication low-power radio link.